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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/728,235

12/03/2003

Satoshi Okamura

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EXAMINER
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PETERSON, CHRISTOPHER K

ART UNIT	PAPER NUMBER
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2622

MAIL DATE	DELIVERY MODE
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07/10/2007

PAPER.

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 10/728,235	Applicant(s) OKAMURA, SATOSHI	
	Examiner Christopher K. Peterson	Art Unit 2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 25 April 2007.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 December 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments, see pages 5-7, filed 04/25/2007, with respect to the rejection(s) of claim(s) 1-12 under Matsumoto '906 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Takahashi et al. (US Pat. #5,831,676).

### ***Drawings***

2. Figures 3 and 4 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

3. Claim 1 is objected to because of the following informalities:

Applicant cites "at least one of the image sensing mode [of] the image sensing condition that is set by said setting unit" in line 10 of the amendment response to

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02/06/07, Office Action, but cites "at least one of the image sensing mode and the image sensing condition that is set by said setting unit" in original application.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The USPTO "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility" (Official Gazette notice of 22 November 2005), Annex IV, reads as follows:

Descriptive material can be characterized as either "functional descriptive material" or "nonfunctional descriptive material." In this context, "functional descriptive material" consists of data structures and computer programs which impart functionality when employed as a computer component. (The definition of "data structure" is "a physical or logical relationship among data elements, designed to support specific data manipulation functions." The New IEEE Standard Dictionary of Electrical and Electronics Terms 308 (5th ed. 1993).) "Nonfunctional descriptive material" includes but is not limited to music, literary works and a compilation or mere arrangement of data.

When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare *In re Lowry*, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994) (claim to data structure stored on a computer readable medium that increases computer efficiency held statutory) and *Warmerdam*, 33 F.3d at 1360-61, 31 USPQ2d at 1759 (claim to computer having a specific data structure stored in memory held statutory product-by-process claim) with *Warmerdam*, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure per se held nonstatutory).

In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory. See *Lowry*, 32 F.3d at 1583-84, 32 USPQ2d at 1035.

Claims 11 and 12 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter as follows. Claims 11 and 12 define a storage medium embodying functional descriptive material. However, the claim does

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not define a computer-readable medium or memory and is thus non-statutory for that reason (i.e., "When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized" – Guidelines Annex IV). That is, the scope of the presently claimed recording medium can range from paper on which the program is written, to a program simply contemplated and memorized by a person. The examiner suggests amending the claim to embody the program on "computer-readable medium" or equivalent in order to make the claim statutory. Any amendment to the claim should be commensurate with its corresponding disclosure.

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1 – 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Takahashi (US Patent # 5,831,676).

As to claim 1, Takahashi (Fig. 3) discloses an image sensing apparatus comprising:

- an image sensing element (CCD 3) that outputs a charge signal in accordance with a light amount of an object image formed on a light-receiving surface (Col. 4, lines 34 - 54);
- a light-shielding unit (iris 2) that shields said image sensing element from incident light (Col. 4, lines 34 - 54);
- a plurality of compensation units (5, 12, and 14) that compensate a loss in exposure amount for said image sensing element caused by operation of said light-shielding unit (Col. 4, line 55 - Col. 5, line 16).
- a setting unit (key operation 20) for setting at least one of an image sensing mode and an image sensing condition (Col. 5, lines 46 - 55); and
- a compensation control unit (25) that controls a compensation amount for each compensation unit in accordance with the at least one of the image sensing mode and the image sensing condition that is set by said setting unit (Col. 5, lines 46 - 55).

As to claim 9, this claim differs from claim 1 only in that claim 1 is an apparatus claim whereas claim 9 is a method. Thus method claim 9 is analyzed as previously discussed with respect to claim 1 above.

As to claim 10, this claim differs from claim 9 only in that the limitation "priority order" is additionally recited. Takahashi teaches a priority order to each of the plurality of compensation units (5, 12, and 14) in accordance with at least one of the image sensing mode and the image sensing condition that is set by the setting unit (20), and

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the compensation amount for each compensation unit is controlled in accordance with the priority order (Col. 13, lines 13 - 26).

As to claim 2, Takahashi teaches the apparatus according to claim 1, wherein said plurality of compensation units (5, 12, and 14) include at least an image sensing element control unit (12) that controls a charge accumulation time in said image sensing element (3) and a gain control unit (5) that controls a gain of the charge signal (Col. 6, line 48 – Col. 7, line 35).

As to claim 3, Takahashi teaches the apparatus according to claim 2, wherein if the at least one of the image sensing mode and the image sensing condition that is set by said setting unit (20) is set to preferentially control the charge accumulation time, said compensation control unit (25) preferentially controls said gain control unit (Col. 10, lines 1 - 13).

As to claim 4, Takahashi teaches the apparatus according to claim 2, wherein if the at least one of the image sensing mode and the image sensing condition that is set by said setting unit (128) is not set to preferentially control the charge accumulation time, said compensation control unit (25) preferentially controls said image sensing element control unit (Col. 9, lines 30 - 67).

As to claim 5, Takahashi teaches wherein if the image sensing condition set by said setting unit (20) is set to control the charge accumulation time (shutter speed) to become equal to or shorter than a predetermined time, said compensation control unit (25) preferentially controls said gain control unit (5) (Col. 10, lines 6 - 13 and Col. 22, lines 4 - 39).

As to claim 6, Takahashi teaches wherein if the image sensing condition (Para 0069) set by said setting unit (20) is set to control the charge accumulation time (shutter speed) to become longer than a predetermined time, said compensation control unit (25) preferentially controls said image sensing element control unit (12) (Col. 10, lines 6 - 13).

As to claim 7, Takahashi teaches the apparatus according to claim 1, wherein said light-shielding unit (2) shields light at least for a period during which said image sensing element (3) outputs the charge signal (Col. 6, lines 30 - 47). The iris is a mechanical shutter, which would close completely to read out the image-sensing element.

As to claim 8, Takahashi teaches the apparatus according to claim 1, wherein said compensation control unit (25) gives a priority order to each of said plurality of compensation units (5, 12, and 14) in accordance with the at least one of the image sensing mode and the image sensing condition that is set by said setting unit (20), and controls the compensation amount for each compensation unit in accordance with the priority order (Col. 19, line 28 – Col. 20, line 38).

As to claims 11 and 12, Takahashi teaches a system control circuit (micro-computer 25). A computer readable medium, readable by an information processing apparatus, storing a program including program codes capable of realizing the control method according to claim 9, the program being executable by the information processing apparatus is inherent to a micro-computer (Col. 5, lines 42 - 55).



### ***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Tsujino (US Patent #6903776) is cited to teach a digital camera with a timing generator.

Katayama (US Patent #6903776) is cited to teach an image combining apparatus for generating a single image.

Ejima (US Patent Pub. #2002/0122133) is cited to teach a digital camera and image processing system.

Voss (US Patent Pub. #2004/0070682) is cited to teach a digital camera with an adjustable image resolution.

### ***Inquiries***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher K. Peterson whose telephone number is 571-270-1704. The examiner can normally be reached on Monday - Friday 6:30 - 4:00 EST.

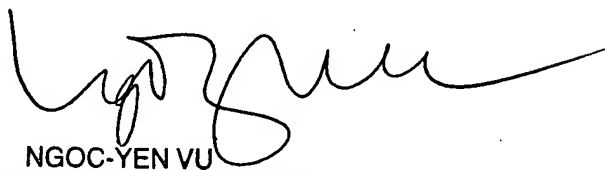
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, NgocYen Vu can be reached on 571-272-7320. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CKP

03 July 2007



NGOC-YEN VU  
SUPERVISORY PATENT EXAMINER